

DATA VALIDATION CHECKLIST – STAGE 2A

Site Name	Columbia Falls Aluminum Company	Project No.	103P4219
Data Reviewer (signature and date)	<i>Debbie Kuhl</i> June 21, 2017	Technical Reviewer (signature and date)	<i>Jessica A. Vickers</i> June 23, 2017
Laboratory Report No.	460-131674-1	Laboratory	TestAmerica Laboratories, Inc./ Edison, New Jersey
Analyses	Resource Conservation and Recovery Act (RCRA) metals by EPA 6020A/7471B/7470A, fluoride by 9056A, total cyanide by EPA 9012B, and polychlorinated biphenyls (PCBs) by EPA 8082A		
Samples	Thirty three solid and three aqueous field QC samples		
Field Duplicate Pairs	PRF-02-001-C/PRF-02-001-CD and PRF-04-001-C/PRF-04-001-CD		
Field Blanks	Rin-01-002, Rin-01-003, and Rin-01-004		

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA's *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (January 2017) and *NFGs for Inorganic Superfund Methods Data Review* (January 2017).

OVERALL EVALUATION

The data are acceptable and usable as qualified.

Data completeness:

Within Criteria	Exceedance/Notes
Y	The contingent TCLP analyses listed on the COC forms were cancelled by Tetra Tech.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	One or more containers for samples PRF-02-001-C, PRF-02-002-C, PRF-02-006-C, and PRF-02-007-C arrived at the laboratory broken or leaking. The contents were salvaged into new containers at the laboratory. No data required qualification for this issue.



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Method blanks:

Within Criteria	Exceedance/Notes
N	Method blank associated with the solid cyanide batch 432058 contained cyanide above the reporting limit (RL). Cyanide results for associated samples PRF-04-007-C and PRF-04-008-C were raised to the RL and qualified as not detected (flagged U).

Field blanks:

Within Criteria	Exceedance/Notes
Y	All rinsate blanks were free of target analytes.

System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
N	PRF-02-002-C. The percent recovery (%R) of PCB surrogate compound decachlorobiphenyl exceeded the upper control limit. No PCBs were found in the sample. Therefore, no qualification was warranted.

MS/MSD:

Within Criteria	Exceedance/Notes
N	<p>Fluoride: PRF-02-001-C. MS and MSD %Rs exceeded the upper control limit and RPD exceeded control limit. However, the amount of fluoride in the parent sample was greater than four times the amount spiked, overwhelming the spiking solution and invalidating the results. No qualification was applied.</p> <p>Cyanide: PRF-04-007-C. MS/MSD RPD exceeded the control limit. The cyanide result for this sample was qualified as not detected because of blank contamination; therefore, no further qualification was necessary.</p> <p>Rin-01-002. MS and MSD %Rs exceeded the upper control limit. No cyanide was found in the parent sample; therefore, no qualification was required.</p>



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Laboratory duplicates:

Within Criteria	Exceedance/Notes
N	

Field duplicates:

Within Criteria	Exceedance/Notes
N	<p>PRF-02-001-C and PRF-02-001-CD. The difference criteria was exceeded for silver. Therefore; the silver results for both samples were qualified as estimated (flagged J/UJ).</p> <p>PRF-04-001-C and PRF-04-001-CD. RPDs for chromium (55), cyanide (148), and fluoride (121) exceeded control criteria. Therefore; chromium, cyanide, and fluoride results for both samples were qualified as estimated (flagged J).</p>

LCS/LCSD:

Within Criteria	Exceedance/Notes
Y	



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Sample dilutions:

Within Criteria	Exceedance/Notes		
Y	Analytes	Dilution	Samples
	Arsenic, barium, cadmium, chromium, lead, selenium, and silver	20	PRF-02-001-C, PRF-02-001-CD, PRF-02-002-C, PRF-02-003-C, PRF-02-004-C, PRF-02-005-C, PRF-02-006-C, PRF-02-007-C, PRW-02-001-C, PRW-02-002-C, PRF-03-001-C, PRF-03-002-C, PRF-03-003-C, PRF-03-004-C, PRF-03-005-C, PRF-03-006-C, PRF-03-007-C, PRF-03-008-C, PRS-03-001-C, PRW-03-001-C, PRW-03-002-C, PRF-04-001-C, PRF-04-001-CD, PRF-04-002-C, PRF-04-003-C, PRF-04-004-C, PRF-04-005-C, PRF-04-006-C, PRF-04-007-C, PRF-04-008-C, PRW-04-001-C, and PRW-04-002-C
	Arsenic, barium, cadmium, chromium, selenium, and silver	20	PRF-02-008-C
	Arsenic, barium, cadmium, chromium, lead, selenium, and silver	2	RIN-01-002, RIN-01-003, and RIN-01-004
	Lead	100	PRF-02-008-C
	Fluoride	100	PRF-02-005-C
	Fluoride	50	PRF-02-002-C and PRF-02-007-C
	Fluoride	20	PRF-02-001-C, PRF-02-003-C, and PRF-02-008-C
	Fluoride	10	PRF-02-001-CD, PRF-02-004-C, PRF-02-006-C, PRW-02-001-C, PRW-02-002-C, PRF-03-001-C, PRF-03-002-C, PRF-03-003-C, PRF-03-004-C, PRF-03-005-C, PRF-03-006-C, PRF-03-007-C, PRF-03-008-C, PRS-03-001-C, PRW-03-002-C, PRF-04-001-C, PRF-04-001-CD, PRF-04-002-C, PRF-04-003-C, PRF-04-004-C, PRF-04-005-C, PRF-04-006-C, PRF-04-007-C, PRF-04-008-C, PRW-04-001-C, and PRW-04-002-C
	Cyanide	20	PRW-02-002-C, PRW-03-002-C, and PRW-04-002-C

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
Y	



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MDLs/RLs:

Within Criteria	Exceedance/Notes
N	Detections below RLs were appropriately qualified as estimated (flagged J) by the laboratory.

Other [specify]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

